

Summary of Fish and Aquatic Species Sensitive Species List Update

Kate Walker and Scott Spaulding (2/13/2011)

The following summarizes the process undertaken in the review and update of the R1 Sensitive Species list for aquatic animals. **Table 1** displays the general process followed in vetting species for inclusion or removal from the Regional sensitive species list. This schematic was extracted from a write-up by R1 wildlife biologists in 2004: “Northern Region Forest Service 2004 Sensitive Species List Update Process for Wildlife,” September 8, 2004. That wildlife write-up and general process includes consideration of Forest Service Manual direction, along with Natural Heritage Program (NHP) State and Global species rankings and survey of professionals with local information on species status.

Three aquatic animal species emerged from this process as warranting an update on the Regional Forester’s Sensitive species list. These include the western pearlshell mussel (*Margaritifera falcata*) as a new inclusion, the sturgeon chub (*Machybopsis gelida*) to be excluded, and the arctic grayling (*Thymallus arcticus*) range modified (**Table 2**).

Western Pearlshell

Over the past several years the Montana Natural Heritage Program has emphasized a systematic training and documentation process to increase observations of the western pearlshell (Stagliano 2010). This empirical and literature research has led the pearlshell to being placed on the Montana’s species of concern list as an S2 (vulnerable to extinction in that state and was already an S2 in Idaho) due to large scale declines in the state of Montana over the last 100 years (Stagliano 2010). Multiple factors have likely led to this decline and these could include reductions in distribution of the parasitic host (westslope cutthroat trout) and habitat degradation (dewatering, low dissolved oxygen, unstable stream beds, lack of suitable substrates, pollution and predation) that can lead to reduced recruitment from juvenile to adult organisms (Stagliano 2010).

As such, this recent systematic documentation of status and decline led to a relatively easy determination that this species should be included to the Regional Forester’s Sensitive Species list in 2011(**Table 2**), using the Table 1 filtering process.

Additional reports and correspondence related to status and concern related to the Western Pearlshell can be found in the 2011 sensitive species project file. Additional work needs to be done to document the current distribution of the species across its range in R1 for Montana and Idaho. The Region aquatics program will continue to work with MT and ID Natural Heritage Programs to refine distribution and status information related to the species that will help in project specific analysis. In addition to field surveys a model that has been developed by the MT Natural Heritage Program can be used to help predict stream habitats that may be likely to have habitat conditions conducive to pearlshell mussel occupancy and production (Stagliano 2008). Detections from the 2006-2008 surveys and other compiled records were used to create models of species’ predicted distributions in order to assist with future sampling efforts and management decisions. This model can be used across Montana to help biologists better focus efforts of concern and examination at the project scale.

Sturgeon Chub

Montana Heritage downgraded the status of sturgeon chub to S2/S3 based on surveys that identified additional habitat and populations. No populations have been identified on NFS lands (Custer NF). The downgrade is supported by the statement in the North Dakota Wildlife Action Plan that the habitat for the Sturgeon Chub in the Little Missouri River is no longer viable due to the loss of free-flowing Missouri as a low-water refugia. The state of ND considers it extirpated on NFS land. This change is reflected in **Table 2**.

Arctic Grayling

The final change to the R1 Sensitive Species list is a modification or clarification of the range considered for grayling in R1. The USFWS published 50 CFR Part 17 [Docket No. FWS-R6-ES-2009-0065][MO 92210-0-0008-B2]; a revised 12 month finding on a petition to list the upper Missouri River Distinct Population Segment (Missouri River DPS) of Arctic grayling (*Thymallus arcticus*) as endangered or threatened under the Endangered Species Act of 1973, as amended. They identify the species as warranted for listing but precluded by higher priority efforts. Our efforts with the revised R1 Sensitive Species List, simply bring these findings and distribution for the upper Missouri River DPS to bear on our list so that distribution and population segments are consistent. Functionally, this articulates that populations established outside of the historic range and or supported by State stocking do not need to be considered under the Regional Foresters sensitive species listing. Also, and consistent with the FWS finding, if experimental efforts to reestablish populations in the historic range of the species in the Sun and Ruby River drainages, then this would need to be considered as part of the Regional Foresters sensitive species designation.

Species Watch List

In a survey of Natural Heritage lists and conversations with biologists, additional species were identified as species of potential concern yet we did not have enough information for a sensitive species designation. This list identifies some species that the Region should continue to track, develop more information on, and as more information becomes available on distribution and status continue to build a species record. This “species watch list”, **Table 3**, currently is comprised of aquatic invertebrates. However, this list can serve as a continuously updateable document for the Region so that during the comprehensive list update the Region has an early start on some focal species.

Table 1. Process for Wildlife and Fish

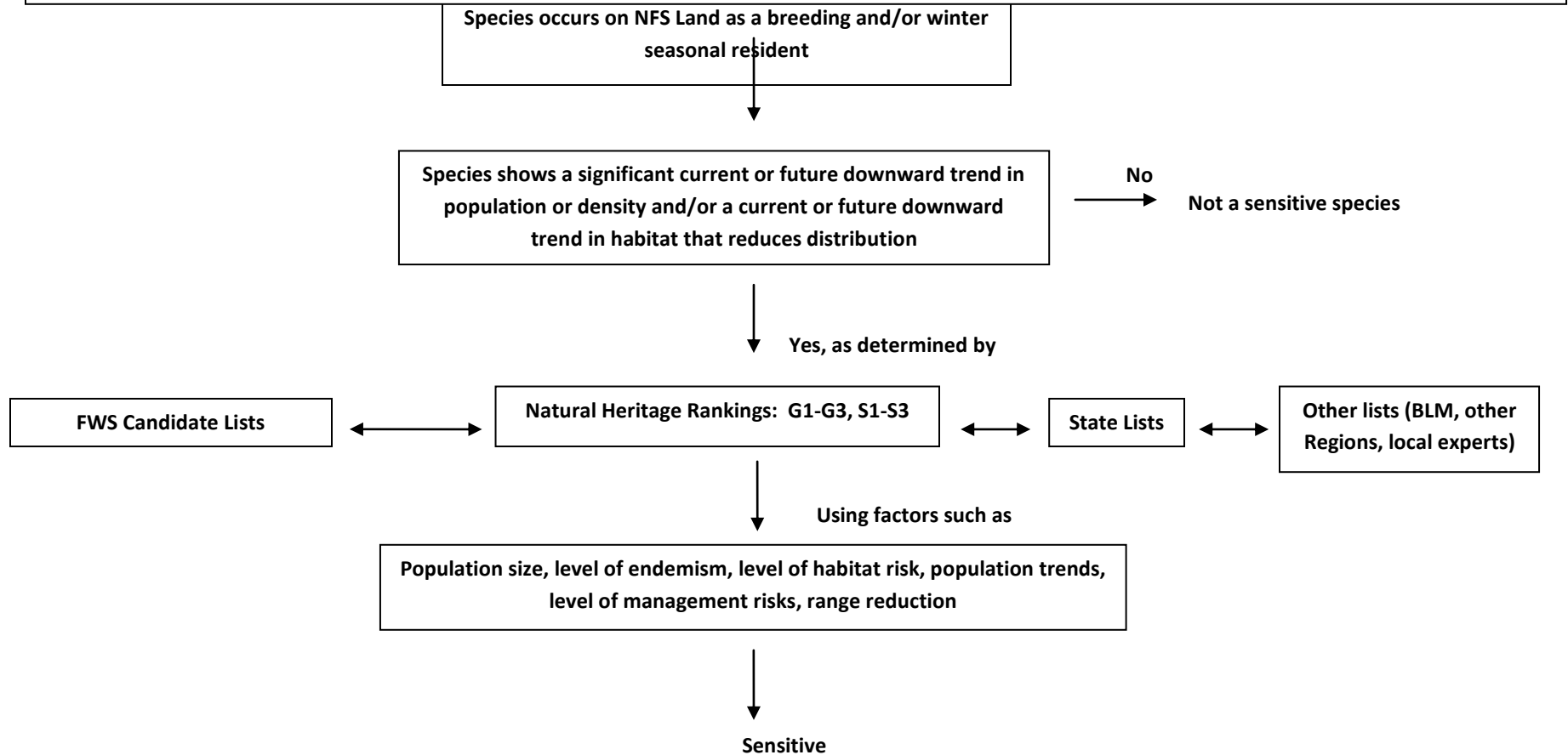


Table 2. 2011 USFS Region 1 Sensitive Species List update- Fish.

| Species | States Where Sensitive (a) | | | | | Forests Where Species is Known (K) or Suspected (S) to Occur | | | | | | | | | | | | | | Comments | |
|---|----------------------------|----|----|----|----|--|-----|-----|------|------|------|-------|------|------|-------|-------|------|-------|------|----------|---|
| | MT | ID | ND | SD | | | B/D | BRT | CL W | CU S | DP G | FLA T | GA L | HE L | IPN F | KOO T | L& C | LOL O | NE Z | | |
| FISH | | | | | | | | | | | | | | | | | | | | | |
| *Pacific Lamprey (<i>Lampetra tridentata</i>) | | | S1 | | | | | S | K | | | | | | | | | | | K | |
| *Northern Redbelly Dace (<i>Phoxinus eos</i>) | | | | S2 | S2 | | | | | S | K | | | | | | | | | | |
| *Yellowstone Cutthroat (<i>Oncorhynchus clarki bouvieri</i>) | | S2 | S2 | | | | | | | K | | | | K | | | | | | | |
| *Arctic Grayling (<i>Thymallus arcticus montanus</i>),Upper Missouri River Distinct Population Segment(DPS) | | S1 | | | | | | K | | | | | | | | | | | | | If fluvial populations are established by FWP efforts in historic range (e.g., Ruby River or Sun River) these would become part of the DPS. |
| *Westslope Cutthroat (<i>Oncorhynchus clarki lewisi</i>) | | S2 | S3 | | | | K | K | K | | | K | K | K | K | K | K | K | K | K | |
| *Interior Redband (<i>Oncorhynchus mykiss gairdneri</i>) | | S1 | S4 | | | | | | S | | | | | K | K | | | | | K | |
| *Snake River SPR/SUM Chinook (<i>Onccorhynchus tshawtscha</i>) | | | S1 | | | | | K | K | | | | | | | | | | | K | Some stocks are federally listed species, naturalized populations are sensitive |
| *Burbot (<i>Lota lota</i>) | | | S1 | | | | | | | | | | | K | K | | | | | | Northern Idaho only |

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|--|--|----------------------------|----|----|----|--|--|-----|------|------|------|-------|------|------|-------|-------|------|-------|------|---|
| | | MT | ID | ND | SD | | B/D | BRT | CL W | CU S | DP G | FLA T | GA L | HE L | IPN F | KOO T | L& C | LOL O | NE Z | |
| FISH | | | | | | | | | | | | | | | | | | | | |
| MOLLUSKS | | | | | | | | | | | | | | | | | | | | |
| Western Pearlshell (<i>Margaritifera falcata</i>) | | S2 | S2 | | | | K | K | K | | | S | K | K | K | K | K | K | K | Added due to declining viable populations in it's range |
| Species Removed 2010 | | | | | | | | | | | | | | | | | | | | |
| *Sturgeon Chub (<i>Macrhybopsis gelida</i>) | | S2/S3 | | S2 | S2 | | | | | | | | | | | | | | | Downgrade of status in Montana and none found on NFS lands. |

* Indicates this species was on the 2004 USFS R1 Sensitive Species List

(a) Species are listed as Sensitive by State. The State where a species is listed as Sensitive is indicated by an "X" in the State/species column. A species identified as Sensitive within a State, will be considered as Sensitive on all Units within the State where it occurs, unless described otherwise.

(b) National Forest (Grasslands) where a species is known or suspected to occur, within States where a species is listed as Sensitive, are identified by shading and either a known "K" or suspected "S" in the Forest/species column

Table 3._AQUATIC SPECIES THAT NEED FURTHER INFORMATION OF DISTRIBUTION AND HABITATS ON NFS LANDS

| Sub Group Name | Section Name | S NAME | S COMNAME | F Common Name | G_RANK | S_RANK | COUNTY | Short_Habitat |
|-------------------------|--------------|-------------------------------|---|-----------------------|--------|--------|----------------------------|---------------------------------|
| Montana | | | | | | | | |
| Invertebrates - Insects | Caddisflies | <i>Goereilla baumanni</i> | Northern Rocky Mountains Refugium Caddisfly | Rossianid Caddisflies | G2 | S2 | Lake, Missoula | Forested mountain springs |
| Invertebrates - Insects | Caddisflies | <i>Rhyacophila alexanderi</i> | Alexander's Rhyacophilan Caddisfly | Primitive Caddisflies | G2 | S2 | Lake | Mountain / alpine streams |
| Invertebrates - Insects | Caddisflies | <i>Rhyacophila newelli</i> | A Rhyacophilan Caddisfly | Primitive Caddisflies | G2 | S2 | | Alpine / Mountain streams |
| Invertebrates - Insects | Caddisflies | <i>Rossiana montana</i> | Northern Rocky Mountains Refugium Caddisfly | Rossianid Caddisflies | G2G3 | S2 | Mineral, Missoula, Sanders | Forested mountain springs |
| Invertebrates - Insects | Mayflies | <i>Caurinella idahoensis</i> | Lolo Mayfly | Ephemerellid Mayflies | G3 | S2 | Mineral, Missoula, Sanders | Small forested mountain streams |
| Invertebrates - Insects | Mayflies | <i>Parametetus columbiae</i> | A Mayfly | Siphonurid Mayflies | G2 | S1 | Flathead, Glacier | Small forested mountain streams |
| Invertebrates - Insects | Stoneflies | <i>Soliperla salish</i> | Clearwater Roachfly | Roachlike Stoneflies | G2 | S2 | Mineral, Sanders | |
| Invertebrates - Insects | Stoneflies | <i>Soyedina potteri</i> | Northern Rocky Mountains Refugium | Spring Stoneflies | G2 | S2 | Mineral, Missoula, Sanders | Small forested mountain streams |

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|--------------------------|--------------------|--------------------------------|---------------------|---------------------------------|--------|--------|--------------------------|---------------------------|
| | | | Stonefly | | | | | |
| Invertebrates - Insects | Stoneflies | <i>Zapada cordillera</i> | A Stonefly | Spring Stoneflies | G3 | S2 | Flathead, Lake, Missoula | Alpine / Mountain streams |
| Invertebrates - Mollusks | | <i>Fisherola nuttalli</i> | Shortface Lanx | Fossarias / Pondsnailes / Lanxs | G2 | SH | | Lakes |
| Invertebrates - Other | Freshwater Sponges | <i>Ephydatia cooperensis</i> | A Freshwater Sponge | Spongillid Sponges | G1G3 | S1S3 | Missoula, Powell | Lakes |
| Idaho | | | | | | | | |
| Invertebrates - Insects | Mayflies | <i>Ameletus ammophilis</i> | | | G1G3 | S2 | | |
| Invertebrates - Insects | Mayflies | <i>Caurinella idahoensis</i> | | | G3G4 | S1 | | |
| Invertebrates - Insects | Mayflies | <i>Centroilum selanderorum</i> | | | G1 | S1 | | |
| Invertebrates - Insects | Stoneflies | <i>Capnia zukeli</i> | | | G1G2 | S1 | | |
| Invertebrates - Insects | Stoneflies | <i>Soyedina potteri</i> | | | G2 | S1 | | |
| Invertebrates - Insects | Stoneflies | <i>Pictetiella expansa</i> | | | G3 | S1 | | |
| Invertebrates - Insects | Caddisflies | <i>Agapetus montanus</i> | | | G3 | S2 | | |
| | | | | | | | | |
| North Dakota | | | | | | | | |
| Invertebrates - Mollusks | | <i>Amblema plicata</i> | Threeridge | | | S2 | | |
| Invertebrates - Mollusks | | <i>Fusconaia flava</i> | Wabash Pigtoe | | | S2 | | |

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|--------------------------|--------------|----------------------------|-------------------|---------------|--------|--------|--------|---------------|
| Invertebrates - Mollusks | | <i>Quadrula quarula</i> | Mapleleaf | | | S2 | | |
| Invertebrates - Mollusks | | <i>Ligumia recta</i> | Black Sanshell | | | S2 | | |
| Invertebrates - Mollusks | | <i>Lasmigona compressa</i> | Creek Heelslitter | | | S2 | | |
| Invertebrates - Mollusks | | <i>Potamilus alatus</i> | Pink Heelsplitter | | | S2 | | |

Literature Cited

- Cherry, M., S. Blair, R. Feigley, J. Ormiston, A. Rohrbacher, A. Warm, T. Whitford, and T. Wittinger. 2004. Northern Region Forest Service 2004 Sensitive Species List Update Process For Wildlife September 8, 2004. Region One of the Forest Service, Process for the 2003-04 review and update process for the wildlife portion of the March 1999 R1 Sensitive Species List.
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